

In the Claims

1 - 13. (Cancelled)

14. (Currently amended) A process for producing a mammal, selected from the group consisting of mouse, pig and bovine ~~eattle~~ made resistant to infection by a PRV or BHV-1 virus ~~viruses~~, said process comprising the steps of:

- a) constructing a transgene recombinant DNA including at least the coding sequence of a fusion protein of the V domain or the VCC domain of porcine or bovine nectin-1 and the crystallisable fragment of an immunoglobulin selected from the group consisting of human, porcine, and bovine ~~or mouse~~-immunoglobulin operably linked to a promoter and regulatory sequences and optional ~~targeting sequences and~~ selectable markers;
- b) introducing said transgene DNA into pronuclei of fertilized zygotes of said mammal by microinjection or into cultured cells of said mammal by electroporation or transfection, and selecting cells having incorporated said transgene DNA into their genome ~~in a targeted location by homologous recombination;~~
- c) transferring into the reproductive tract of a recipient female said microinjected pronuclei of fertilized zygotes, or transferring nuclei of said targeted cells into enucleated oocytes and transferring the reconstructed embryos into the reproductive tract of a recipient female;
- d) selecting among progeny of said recipient female founder transgenic mammals having incorporated said transgene DNA into their genome and expressing said fusion protein; and
- e) breeding said founder transgenic mammals with non-transgenic mammals in successive generations and selecting carriers of said DNA transgene from among the progeny.

15. (Currently amended) A The process according to claim 14, wherein said immunoglobulin is a gamma type immunoglobulin.

16. (Cancelled)
17. (Currently amended) A mammal ~~belonging to a non-human species, wherein said mammal is produced by the process of claim 14, wherein said mammal is selected from the group consisting of a mouse, a pig and a bovine.~~
18. (Previously presented) The mammal of claim 17, wherein said immunoglobulin is a gamma type immunoglobulin.
19. (Cancelled)
20. (Cancelled)
21. (Currently amended) A The mammal according to claim 17, wherein said mammal belongs to a porcine species and said virus is a PRV virus.
22. (Currently amended) A The mammal according to claim 17, wherein said mammal belongs to a bovine species and said virus is a BHV-1 virus.
23. (Currently amended) A The mammal according to claim 17, wherein said mammal contains in its cells' genome a coding transgene for a chimeric protein comprising said V domain or VCC domain of nectin-1 and said crystallisable fragment of an immunoglobulin, in an expression system, said transgene having been inserted in a genome of a germinal line of one of its parents.
24. (Currently amended) Genetic material in germplasm ~~essentially~~ derived from said mammal according to claim 17.
25. (Cancelled)
26. (Cancelled)

27. (Previously presented) The process according to claim 14, wherein the expressed fusion protein is soluble and is secreted into serum of the progeny.

28. (New) Genetic material in germplasm derived from said mammal according to claim 23.

29. (New) A process for producing a mammal, selected from the group consisting of mouse and pig made resistant to infection by a PRV virus, said process comprising the steps of:

- a) constructing a transgene recombinant DNA including at least the coding sequence of a fusion protein of the V domain or the VCC domain of porcine nectin-1 and the crystallisable fragment of an immunoglobulin selected from the group consisting of human and porcine-immunoglobulin operably linked to a promoter and regulatory sequences and optional selectable markers;
- b) introducing said transgene DNA into pronuclei of fertilized zygotes of said mammal by microinjection or into cultured cells of said mammal by electroporation or transfection, and selecting cells having incorporated said transgene DNA into their genome;
- c) transferring into the reproductive tract of a recipient female said microinjected pronuclei of fertilized zygotes, or transferring nuclei of said targeted cells into enucleated oocytes and transferring the reconstructed embryos into the reproductive tract of a recipient female;
- d) selecting among progeny of said recipient female founder transgenic mammals having incorporated said transgene DNA into their genome and expressing said fusion protein; and
- e) breeding said founder transgenic mammals with non-transgenic mammals in successive generations and selecting carriers of said DNA transgene from among the progeny.

30. (New) A process for producing a transgenic pig made resistant to infection by a PRV virus, said process comprising the steps of:

- a) constructing a transgene recombinant DNA including at least the coding sequence of a fusion protein of the V domain or the VCC domain of porcine or bovine nectin-1 and the crystallisable fragment of an immunoglobulin selected from the group consisting of human and porcine immunoglobulin operably linked to a promoter and regulatory sequences and optional selectable markers;
- b) introducing said transgene DNA into pronuclei of fertilized zygotes of said mammal by microinjection or into cultured cells of said mammal by electroporation or transfection, and selecting cells having incorporated said transgene DNA into their genome;
- c) transferring into the reproductive tract of a recipient female said microinjected pronuclei of fertilized zygotes, or transferring nuclei of said targeted cells into enucleated oocytes and transferring the reconstructed embryos into the reproductive tract of a recipient female;
- d) selecting among progeny of said recipient female founder transgenic mammals having incorporated said transgene DNA into their genome and expressing said fusion protein; and
- e) breeding said founder transgenic mammals with non-transgenic mammals in successive generations and selecting carriers of said DNA transgene from among the progeny.

31. (New) A transgenic pig produced by the process of claim 30.

32. (New) The transgenic pig according to claim 31, wherein said transgenic pig contains in its cells' genome a coding transgene for a chimeric protein comprising said V domain or VCC domain of nectin-1 and said crystallisable fragment of an immunoglobulin, in an expression system, said transgene having been inserted in a genome of a germinal line of one of its parents.

33. (New) Genetic material in germplasm derived from the transgenic pig according to claim 31.

34. (New) Genetic material in germplasm derived from the transgenic pig according to claim 32.

35. (New) The process according to claim 30, wherein the expressed fusion protein is soluble and is secreted into serum of the progeny.